

resources, erosion, conservation, transport, renewable energy, biomass, ethanol and biodiesel, conservation, and pests and diseases. The main authors and the other authors that joined them in eight of the chapters are to be congratulated for the crisply written text that has relatively little repetition between chapters, yet manages to demonstrate with commendable clarity the close interrelationship between food production, energy dependency, and the development of societies.

Some may find the partial reliance on the particular situation of the USA a minor distraction, but it is justified, nonetheless. Undoubtedly, the two weakest components of the book are firstly its brevity on new technologies and concepts, and this accounts for the somewhat disappointing final chapter entitled 'Summing Up: Options and Solutions' although its blunt analysis of future prospects is surely correct. Secondly, it is prone to 'political correctness', for example in dealing with pesticides, a particular interest of David Pimentel. Despite these downsides, the polymathic approach of this book succeeds in its aims. It enlightens and has great utility for strategic planning and teaching.

John R. Hillman

*Guide to Cultivated Plants*. By T. Elzebroek and K. Wind. Wallingford, UK: CAB International (2008), pp. 540, £95.00. ISBN 978-1-84593-356-2. doi:10.1017/S0014479708007163

This book is intended as 'a standard reference text for students, extension workers, farmers, horticulturalists. . .'. It does not cover ornamentals (except, oddly, *Ribes sanguineum*). Treatments comprise origin and history; botany; cultivars, uses and constituents; ecology and agronomy but not pests and diseases.

Ecology and agronomy go out-of-date slowly, if at all, but the authors have not entirely succeeded in keeping up-to-date with information on crop origins. Errors occur in some of the botanical descriptions. The fruit of quinoa is not a utricle; *Piper* flowers lack a corona; ergot is characterized by dark sclerotia, not sclerotinia; capsaicin is produced only in the placentas of *Capsicum* fruit, not the seeds. Descriptions are not always comparable: lemon seeds are described as polyembryonic but this feature is not mentioned for other citrus species. There are also many taxonomic errors. Even molecular systematists have not transferred *Carica* to the Acanthaceae. Few would divide hexaploid wheat into three species. If *Fagopyrum esculentum* really evolved from *Fallopia convolvulus*, this would be the only current example of a domesticated species originating from a different genus. The myrrh brought to the infant Jesus was gum resin of *Commiphora*, not the European herb *Myrrhis odorata*. Regrettably, statements are not referenced in the text. Finding the original source for any statement is the single bibliography is thus an almost insuperable task.

It may seem nit-picking to concentrate on errors in a wide-ranging and beautifully produced book, but surely a 'standard reference text' needs to be accurate above all.

Barbara Pickersgill

*Integrating New Technologies for Striga Control : Toward Ending the Witch-hunt*. Edited by G. Ejeta and J. Gressel. London: World Scientific Publishing (2007), pp. 356, £55.00. ISBN 978-981-270-708-6. doi:10.1017/S0014479708007175

*Striga* spp. are parasitic weeds that constitute serious production constraints to cereals and legumes in tropical semi-arid regions (mainly Africa). They are sometimes referred to as witchweeds due to their invisible but harmful underground life-cycle stages. Decades of research have resulted in an array of control approaches. However, each one applied as a single control technology will be incapable of providing durable control of this genetically diverse parasitic weed. There is consensus among scientists that more control options need to be explored and that clever integration of some of these technologies is needed to end this 'witch-hunt'.

This peer-reviewed anthology, resulting from a symposium organized by the editors (Professor Gebisa Ejeta, Purdue University and Professor Jonathan Gressel, Weizmann Institute of Science), provides an overview of the state-of-the-art in the understanding of *Striga*-host interactions and offers a suite of control technologies and ideas for their integration. The book is interesting for both its contents and approach. The editors have tried to emphasize the need to look into all options that might help fighting this menace, including more advanced scientific methods like genetic engineering. The book also discusses projected future distributions of *Striga* in the light of global climate change, the lack of integration of biological with social sciences in *Striga* research and the institutional constraints to research and development of integrated *Striga* control in Africa. Such a

multidisciplinary and holistic approach combined with the apparent eagerness of the editors to finally solve the *Striga* problem makes this a highly recommendable book.

Jonne Rodenburg

*Micronutrient Deficiencies in Global Crop Production*. By B. J. Alloway. Heidelberg, Germany: Springer (2008), pp. 353, £107.50. ISBN 978-1-4020-6859-1. doi:10.1017/S0014479708007187

Although climate change remains top of the environmental and political agenda, one of the other items which remains hot on its heels, is the development of sustainable agricultural and food production systems. Implicit in this debate is the provision of nutritious food to an ever-growing human population. Micronutrient deficiency in both crop plants and the human diet remains a critical issues in many areas of the world, including the developed nations. This book takes a global view of the situation, presenting the latest information. The chapters are authored by world experts in the subject area (e.g., Robin Graham, Ismail Cakmak, Patrick Brown, Ross Welch, etc.). The book starts with a general introduction of the topic and then presents a series of geographical focused studies at the national (e.g. Turkey, USA, China) and continental scale (e.g. Africa, Europe, South America). The book ends with a chapter describing the role of micronutrients in human nutrition and ways in which crop plants can be managed to alleviate malnutrition.

Overall, the book is well written and contains lots of valuable information suitable for a range of audiences. The figures are sometimes of poor quality and the chapters all have a different emphasis owing to the dominant issues in that region.

Whilst this does give the book a disjointed feel at times, it still contains a wealth of information and, in my view, represents a worthy purchase. It will make good reading for many agronomy, plant nutrition and agricultural extension professionals.

Davey Jones

*Onions and Other Alliums. 2nd edition*. By J. L. Brewster. Wallingford, UK: CABI (2008), pp. 432, £00.00. ISBN 978-1-84593-399-9. doi:10.1017/S0014479708007199

Dr Brewster can be congratulated for an excellent update of his original volume. In many ways the original set the standard for what has become a valuable crop production series. The book still retains its core strength, describing, in the author's words, 'what makes an onion tick', but this is a major revision with much new information. In particular the sections on breeding/genetics and biochemistry are expanded significantly, incorporating much new information on molecular biology; the author managing to seamlessly incorporate it into the original and still make it highly readable. It also illustrates, even with cutbacks in publicly funded research, that there is still a very active Allium research community.

Inevitably, and as the author admits, there is something of a bias to original UK-based research. Given its relatively tiny proportion of world Allium production this perhaps is not ideal, but simply reflects the author's background and significant past investment in R&D (unfortunately no longer the case). I think the author can be forgiven.

Any criticisms? Well, very few. In Chapter 6, 48 pages on onion production, six on leek production, but only three short paragraphs for garlic seems a trifle skewed. An extra table in Chapter 1 would have been helpful to explain taxonomy changes using new molecular biology techniques. There is also some rare confusion about whether species or biotypes are interfertile, and using this, rather imprecisely, as a definition of speciation. But really these are minor and in no way detract from the overall excellence.

Brian Smith

*Plant Pathology. Concepts and Laboratory Exercises. 2nd edition*. Edited by R. N. Trigiano, M. T. Windham and A. S. Windham. Boca Raton, FL, USA: CRC Press/Taylor and Francis Group (2008), pp. 558, £ 42.99. ISBN 1-4200-4669-1. doi:10.1017/S0014479708007205

There are many plant pathology textbooks on the market but few with this combination of features. It starts with basic introductory concepts then proceeds through the major groups of pathogens. These are interspersed with laboratory exercise chapters. Other chapters contain case studies, which illustrate the main text. There